FIG. 1 (PRIOR ART)

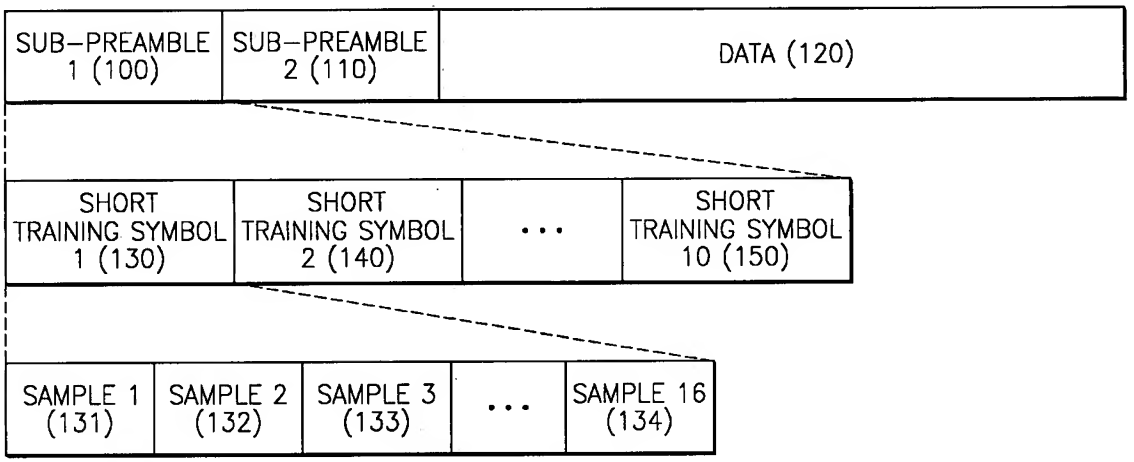

FIG. 2 (PRIOR ART)

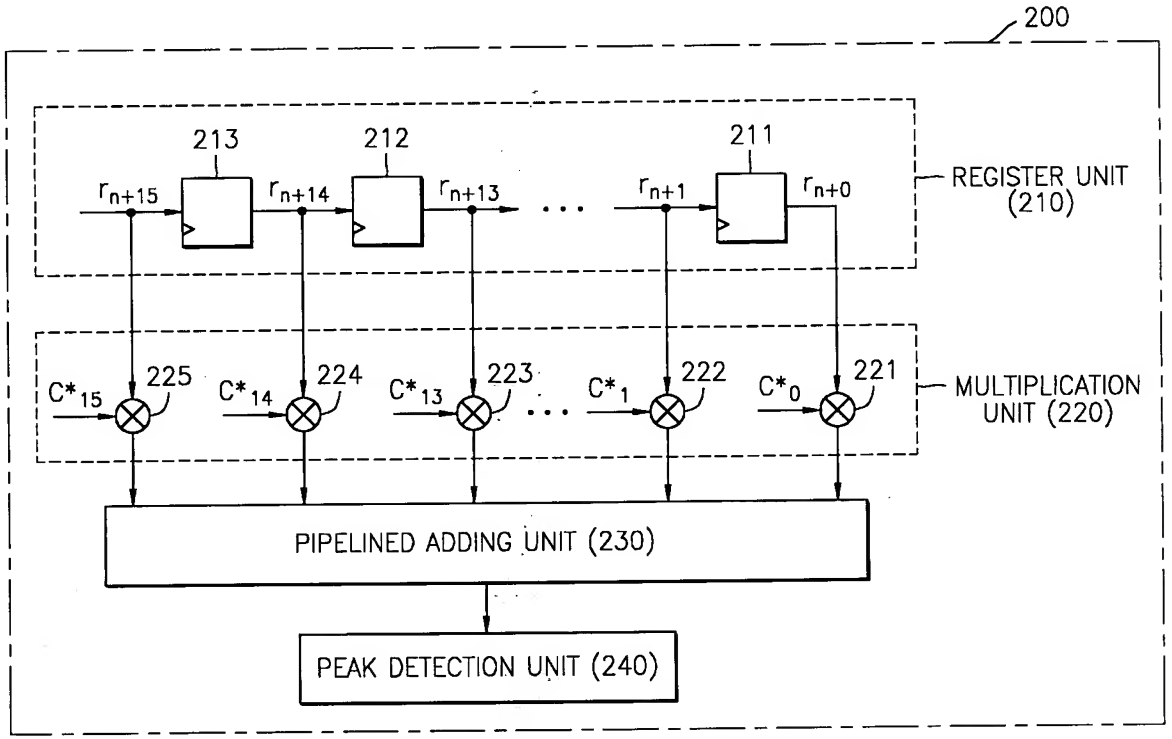

FIG. 3

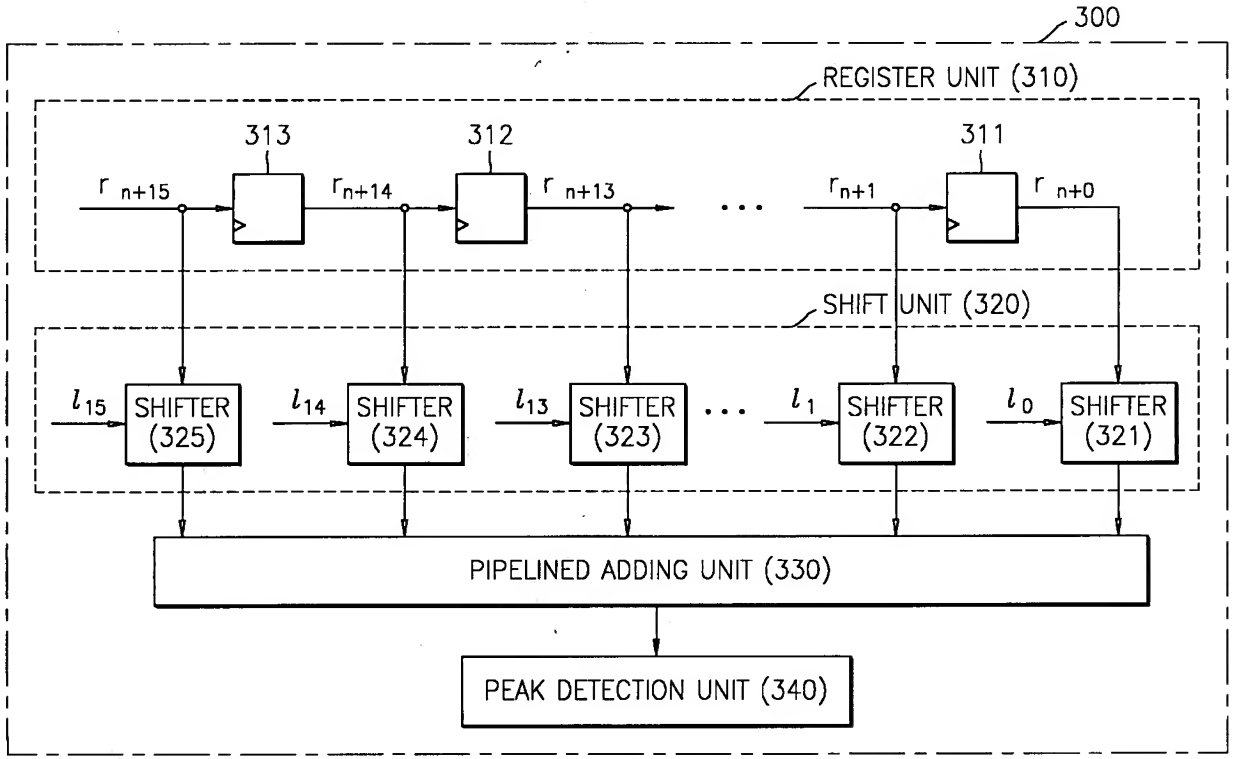
300
REGISTER UNIT (310)
313
312
311
r n+15
r n+14
r n+13
r n+1
r n+0
SHIFT UNIT (320)
l15
SHIFTER (325)
l14
SHIFTER (324)
l13
SHIFTER (323)
l1
SHIFTER (322)
l0
SHIFTER (321)
PIPELINED ADDING UNIT (330)
PEAK DETECTION UNIT (340)

FIG. 4

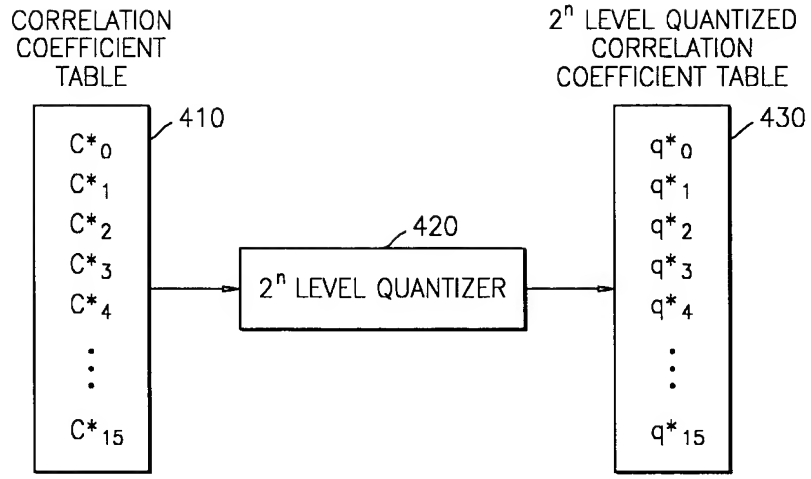
CORRELATION COEFFICIENT TABLE
410
C*0
C*1
C*2
C*3
C*4
C*15
420
2n LEVEL QUANTIZER
2n LEVEL QUANTIZED CORRELATION COEFFICIENT TABLE
430
q*0
q*1
q*2
q*3
q*4
q*15

FIG. 5

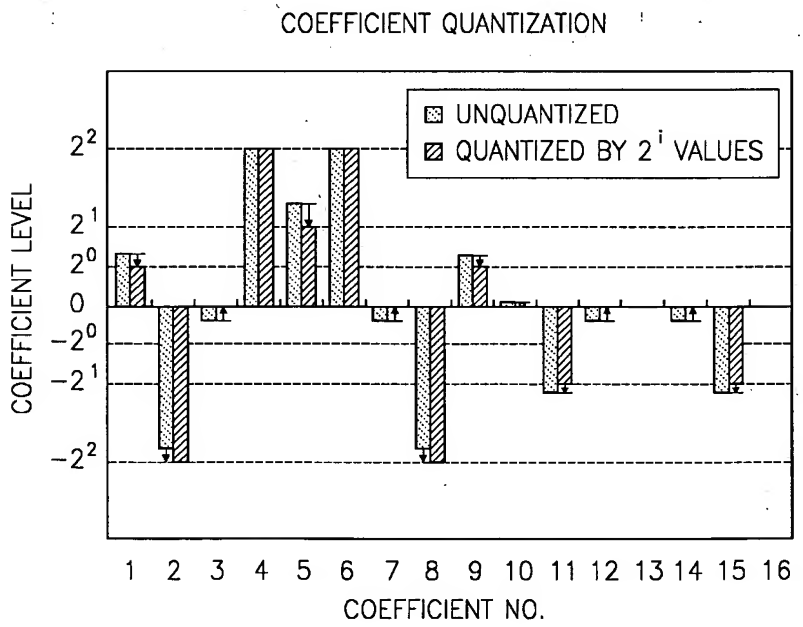
COEFFICIENT QUANTIZATION
UNQUANTIZED
QUANTIZED BY 2i VALUES
COEFFICIENT LEVEL
2^2
2^1
2^0
0
-2^0
-2^1
-2^2
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
COEFFICIENT NO.

FIG. 6

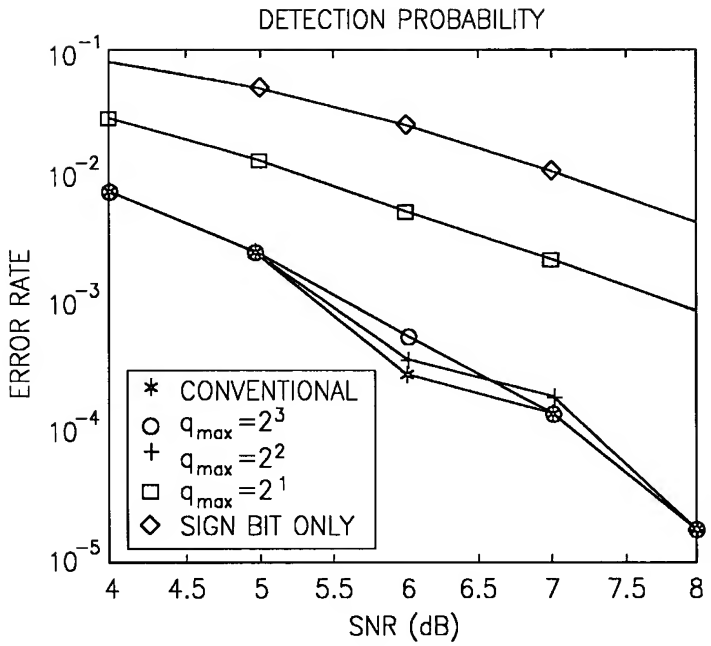

FIG. 7

ITEMS	NUMBER OF GATES	
	CONVENTIONAL SYSTEM	PROPOSED SYSTEM
MULTIPLIERS (8x8)	16	0
REGISTER (8-bit)	15	15
ADDER	1 (16-bit)	1 (11-bit)
TOTAL GATE NUMBER	9495 (100%)	978 (10.3%)